2011-4: Reserved Pool for Critical Infrastructure

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Problem Statement

- ARIN's IPv4 address pool will be exhausted very shortly.

- While NRPM 4.10 reserves a /10 to facilitate IPv6 deployment, it does not reserve space for future IPv4 Critical Infrastructure needs.

- Some Critical Infrastructure providers may be unable to acquire IPv4 space on the transfer market.

Draft Policy Outline

- Place a /16 worth of space in reserve.

- Allocate space under NRPM 4.4 Micro-allocation from this reserved /16.

- If any reserved space remains 36 months following implementation, release it for other purposes.

Draft Policy Text

~~Upon receipt of the last /8 that the IANA will~~
~~allocate to ARIN per the Global Policy for the~~
~~Allocation of the Remaining IPv4 Address Space,~~
ARIN will place an equivalent of a /16 of IPv4
address space in a reserve for Critical Infrastructure,
as defined in section 4.4. If at the end of the policy
term there is unused address space remaining in
this pool, ARIN staff is authorized to utilize this
space in a manner consistent with community
expectations.

Pros

- Allows for continued allocation of IPv4 space to exchange points, TLD operators, and other operators of critical Internet infrastructure defined in NRPM 4.4.

- Requires a relatively small proportion of ARIN's remaining free pool be reserved, and does not require reserving a contiguous /16.

Cons

- Favors providers of certain services over others in terms of acquiring scarce IPv4 address space.

- Removes a /16 worth of space from allocation for other purposes.

- It is unclear whether new infrastructure being deployed after IPv4 free pool exhaustion is "critical" enough to warrant this reservation.

Staff Assessment

- Staff expressed concern about a lack of direct reference to NRPM 4.4, which has since been added to the Draft Policy text.

Discussion?

Appendix – NRPM 4.4

ARIN will make micro-allocations to critical infrastructure providers of the Internet, including public exchange points, core DNS service providers (e.g. ICANN-sanctioned root, gTLD, and ccTLD operators) as well as the RIRs and IANA. These allocations will be no smaller than a /24 using IPv4 or a /48 using IPv6. Multiple allocations may be granted in certain situations. Exchange point allocations MUST be allocated from specific blocks reserved only for this purpose. All other microallocations WILL be allocated out of other blocks reserved for micro-allocation purposes.

ARIN will make a list of these blocks publicly available. Exchange point operators must provide justification for the allocation, including: connection policy, location, other participants (minimum of two total), ASN, and contact information. ISPs and other organizations receiving these micro-allocations will be charged under the ISP fee schedule, while end-users will be charged under the fee schedule for end-users. This policy does not preclude exchange point operators from requesting address space under other policies.